

94306



Shand & Jurs Co.

A COGNESENSE BRAND

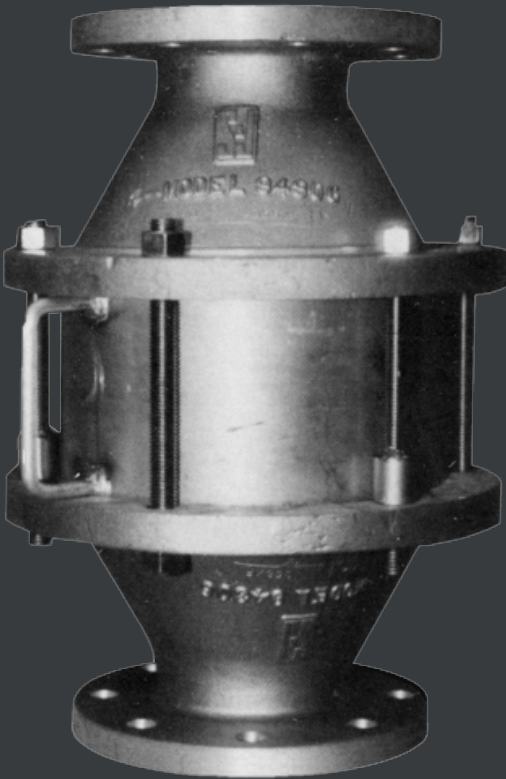
Vertical End-of-Line Flame Arrester

The Shand & Jurs® Model 94306 prevents external ignition from propagating into atmospheric storage tanks and low-pressure vapor systems at open vent discharge points. Installed at the termination of the vent piping, it establishes the flame-arresting boundary at the outlet rather than within the tank or vapor space.

Atmospheric vents operate near ambient pressure during normal breathing cycles but remain exposed to surrounding ignition sources. The spiral-wound crimped ribbon element removes heat from the flame front and quenches combustion before it can reach connected equipment, while allowing unrestricted vapor discharge.

The vertical configuration supports installation below pressure-vacuum vents, pressure vents and free vents where upward discharge is required. FM approval for NEC Group D gases confirms suitability for defined ignition-control locations within ten pipe diameters of the ignition source.

Sizing and pressure-drop verification can be evaluated using the Shand & Jurs WinSize software. Available in 2–12 in. sizes with ANSI Class 150 or EN PN16 flanges.



Key Features

Spiral-wound crimped ribbon element

Quenches flame fronts while preserving normal atmospheric vapor discharge capacity.

Vertical discharge configuration

Places the flame arresting point at the vent outlet rather than inside the tank system.

FM-approved construction

Certified ignition control for NEC Group D gas environments.

Removable tube bank assembly

Allows inspection without disturbing connected piping or vent alignment.

Differential pressure tap ports

Allows monitoring of element condition across the flame bank to determine maintenance timing.

Multiple material constructions

Maintains flame gap integrity in corrosive or condensable vapor service.



Benefits



STOPS FLAME AT THE ATMOSPHERIC OUTLET

Prevents ignition entry into the tank vapor space and connected equipment.



MAINTAINS OPEN VENT FLOW

Avoids unintended pressure accumulation during normal breathing cycles.



DEFINED IGNITION BOUNDARY

Eliminates the need for higher-severity inline detonation protection in atmospheric service.



INSPECTABLE ELEMENT DESIGN

Preserves protection reliability following inspection and maintenance intervals.



CERTIFIED PROTECTION METHOD

Supports code acceptance and the defensibility of hazard analysis in regulated installations.



UNITIZED SHELL AND ELEMENT ASSEMBLY

Preserves flame bank integrity during removal, inspection, and reinstallation.

Available Options



316 stainless steel element

Corrosion resistance in wet or sour gas service.



Cast steel body

Increased mechanical durability for industrial installations.



316 stainless steel body

Full corrosion-resistant construction for aggressive vapors.



ANSI Class 150 RF flange

Raised-face piping compatibility.



EN PN16 flange drilling

Metric piping compatibility.



Protective coatings and materials

Extended service life in severe environments.

Key Performance Data

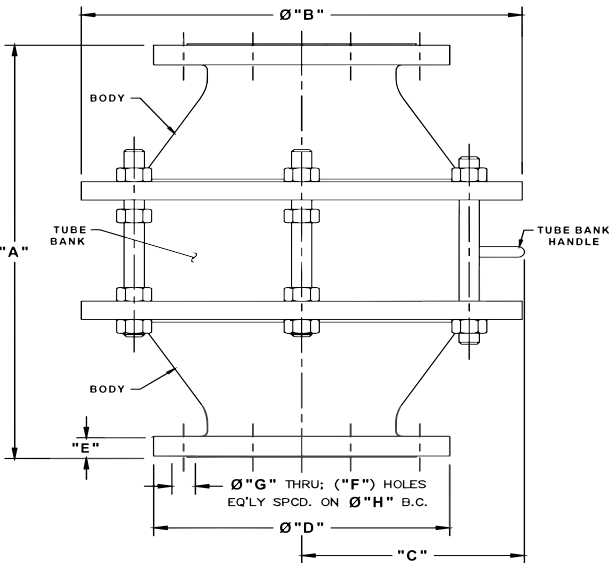
Parameter	Value
Size Range	2", 3", 4", 6", 8", 10", 12"
Temperature Range	-40°F to 220°F, -40°C to 104.4°C
Maximum Operating Pressure	1.0 psig
Maximum Static Pressure	10 psig
Approval	FM Approved — NEC Group D
Installation Location	Within 10 pipe diameters of the ignition source
Flanges	ANSI 150 RF/FF • EN PN16 RF/FF
Body	Cast Aluminum, Cast Steel, or 316 Stainless Steel
Hardware	18-8 Stainless Steel (Standard). 316 Stainless Steel available.
Element	Aluminum or 316 Stainless Steel

Outline Dimensions

Dimensions in Inches									Approximate Shipping Wt. (lbs)	
Vent Size	"A"	Diameter "B"	"C"	Diameter "D"	"E"	Holes "F"	Diameter "G"	Diameter "H"	Alum.	Iron
2"	13 3⁄8	8 ½	7 7⁄16	6	5⁄8	4	3⁄4	4 ¾	15	43
3"	15 5⁄8	10 ½	8 5⁄16	7 ½	¾	4	¾	6	25	65
4"	17 7⁄8	12 ¾	6 ½	9	15⁄16	8	¾	7 ½	45	120
6"	19 7⁄8	16 ¾	8 ¼	11	1	8	7⁄8	9 ½	69	207
8"	24 ½	20 ½	10 ¾	13 ½	1 ⅛	8	7⁄8	11 ¾	93	280
10"	28 7⁄8	24 ½	12 ¼	16	1 ¾	12	1	14 ¼	165	480
12"	32 7⁄8	28 ¾	14 ¾	19	1 ¼	12	1	17	200	610

ANSI Connection shown. Other Connection Sizes Available.

Installation Note: Locate flame arrester within 10 pipe diameters of potential atmospheric ignition source.



Model Number Selection

The model number will consist of a base number 94306 followed by 6 digit numbers. These digits will represent 2 option tables.

94306 - AB - CD - EF

Ordering Information

Specify:

1. Model 94306 Horizontal Flame Arrester
2. Size and Body Material
3. Tube Bank and Shell Material
4. Type of Flange Option
5. Special Materials or Coatings, If Required

Table AB - Size and Body

Table CD - Tube Bank and Shell

Housing	Size	Body Material	Option CD	Tube Bank Material	Shell Material
12	2"	Cast Aluminum	12	Aluminum	Aluminum
			23	316 Stainless Steel	316 Stainless Steel
14	3"	Cast Aluminum	12	Aluminum	Aluminum
			23	316 Stainless Steel	316 Stainless Steel
15	4"	Cast Aluminum	12	Aluminum	Aluminum
			23	316 Stainless Steel	316 Stainless Steel
16	6"	Cast Aluminum	12	Aluminum	Aluminum
			23	316 Stainless Steel	316 Stainless Steel
17	8"	Cast Aluminum	12	Aluminum	Aluminum
			23	316 Stainless Steel	316 Stainless Steel
18	10"	Cast Aluminum	12	Aluminum	Aluminum
			23	316 Stainless Steel	316 Stainless Steel
19	12"	Cast Aluminum	12	Aluminum	Aluminum
			23	316 Stainless Steel	316 Stainless Steel
52	2	Cast Steel	23	316 Stainless Steel	316 Stainless Steel
42	2	Cast 316 Stainless Steel	22	316 Stainless Steel	316 Stainless Steel
54	3	Cast Steel	23	316 Stainless Steel	316 Stainless Steel
44	3	Cast 316 Stainless Steel	22	316 Stainless Steel	316 Stainless Steel
55	4	Cast Steel	23	316 Stainless Steel	316 Stainless Steel
45	4	Cast 316 Stainless Steel	22	316 Stainless Steel	316 Stainless Steel
56	6	Cast Steel	23	316 Stainless Steel	316 Stainless Steel
46	6	Cast 316 Stainless Steel	22	316 Stainless Steel	316 Stainless Steel
57	8	Cast Steel	23	316 Stainless Steel	316 Stainless Steel
47	8	Cast 316 Stainless Steel	22	316 Stainless Steel	316 Stainless Steel
58	10	Cast Steel	23	316 Stainless Steel	316 Stainless Steel
48	10	Cast 316 Stainless Steel	22	316 Stainless Steel	316 Stainless Steel
59	12	Cast Steel	23	316 Stainless Steel	316 Stainless Steel
49	12	Cast 316 Stainless Steel	22	316 Stainless Steel	316 Stainless Steel

HARDWARE: 18-8 SS Standard; Use CD (XX) option for 316 SS; 316 SS Standard for 316 SS Body

Table EF - Flange Type and Drain Plugs

Flange Style	With Drain Plugs Option EF
ANSI 150lb. FF (No Drain)	71
ANSI 150lb. RF (No Drain)	81
EN1092-1 PN16 FF (No Drain)	21
EN1092-1 PN16 RF (No Drain)	31

Note: 1. Raised faced flanges with smooth finish are standard.
For optional serrated raised faced flanges, consult factory.

2. Raised Face Flanges not available with Aluminum bodies.

Tube Banks Only

Parts Number	Size (Inches)	Tube Bank Material	Shell Material	Shipping Weight (lbs.)
9430-10150	2	Aluminum	Aluminum	9
9430-11110	2	316 Stainless Steel	316 Stainless Steel	25
9430-10151	3	Aluminum	Aluminum	14
9430-11111	3	316 Stainless Steel	316 Stainless Steel	35
9430-10152	4	Aluminum	Aluminum	20
9430-11112	4	316 Stainless Steel	316 Stainless Steel	60
9430-10153	6	Aluminum	Aluminum	35
9430-11113	6	316 Stainless Steel	316 Stainless Steel	100
9430-10154	8	Aluminum	Aluminum	55
9430-11114	8	316 Stainless Steel	316 Stainless Steel	160
9430-10155	10	Aluminum	Aluminum	85
9430-11115	10	316 Stainless Steel	316 Stainless Steel	240
9430-10156	12	Aluminum	Aluminum	120
9430-11116	12	316 Stainless Steel	316 Stainless Steel	320

Summary

The Model 94306 establishes the flame-arresting boundary at the atmospheric discharge rather than within the tank system. By quenching ignition at the outlet while maintaining unrestricted vent flow, it protects connected storage equipment without altering normal breathing behavior. The serviceable element and certified construction support predictable inspection practices and a defensible ignition-control design.

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This document is for information purposes only. All designs subject to change. Certified dimensions, specifications, and performance data available upon request